

Appl. No. 10/726,460  
Amdt. Dated March 22, 2007  
Reply to Office Action of December 28, 2006

REMARKS

This is a full and timely response to the non-final Office action mailed December 28, 2006. Reexamination and reconsideration in view of the following remarks is respectfully solicited.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 32-38 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly reciting subject matter that is non-enabled by the specification. Specifically, the examiner asserts that the specification does not enable igniting the solid propellant grain from at least one end.

In response, Applicants commend the examiner's attention to page 10, lines 38-39 of the as filed specification, which states: "The igniter elements can be used to selectively ignite the grain *at one or both surfaces of the grain*" (emphasis added).

In view of the foregoing, reconsideration and withdrawal of the § 112, first paragraph rejection is requested.

Rejections Under 35 U.S.C. § 102

Claims 32-35, and 38 were rejected under 35 U.S.C. § 102 as allegedly being anticipated by U.S. Patent No. 3,010,400 (Guay), and Claims 32, 36, and 37 were rejected under 35 U.S.C. § 102 as allegedly being anticipated by U.S. Patent No. 3,434,426 (Dapper). These rejections are respectfully traversed.

Independent Claim 32 recites, *inter alia*, selectively igniting the symmetrical individual solid propellant grains in the single grain assembly from at least one of the ends in such a way that the individual solid propellant grains are consumed from the two ends in a manner that is substantially symmetrical with respect to the line.

The examiner alleges that Guay discloses, among other things, at least the above-noted feature of independent Claim 1, and appears to believe that the position of the igniter (26) in Guay provides support for this allegation. It is noted, however, that independent Claim 32 does not the position of the igniter relative to at least one of the ends. Rather, it recites "igniting . . . from at least one of the ends." No matter where the igniter of Guay is positioned relative to the propellant grains, there is no getting around that fact that Guay explicitly teaches that the inner

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surface of the propellant grain is ignited, and that burning proceeds radially outward from the inner surface. See col. 3, ll. 67-74. Thus, Guay also fails to teach, or even remotely suggest, that the individual solid propellant grains are consumed from the two ends in a manner that is substantially symmetrical with respect to the line.

As to Dapper, this patent igniting a propellant grain using layers or films of conductive material (12) and combined pyrotechnic and conductive material (13) that run the length of the grain. As a result, the grains, when ignited, burn radially outward. Thus, Dapper also fails to teach, or even remotely suggest, that the individual solid propellant grains are consumed from the two ends in a manner that is substantially symmetrical with respect to the line.

The methodology of the instant invention, as defined by the claims, results in the individual solid propellant grains of the single grain assembly burning substantially symmetrically from one or both ends. In contrast, each of the citations of record disclose, either expressly or inherently, that the grains burn from the centers of the grain assemblies radially outwardly.

In view of the foregoing, Applicants request reconsideration and withdrawal of the § 102 rejections.

### Conclusion

Based on the above, independent Claim 32 is patentable over the citations of record. The dependent claims are also deemed patentable for the reasons given above with respect to the independent claims and because each recite features which are patentable in its own right. Individual consideration of the dependent claims is respectfully solicited.

The other art of record is also not understood to disclose or suggest the inventive concept of the present invention as defined by the claims.

Hence, Applicant submits that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office action, and an early Notice of Allowance are requested.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

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If for some reason Applicant has not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

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